

WHAT IS CLAIMED IS:

1. A method of network communications, comprising:

classifying a communications session to produce a session

5 classification; and

selectively accelerating said communications session in
conformity with said classification.

2. The method of Claim 1, further comprising determining whether
10 or not a threshold number of sessions has been reached for said
session classification, and wherein said acceleration is
disabled for said communications session in response to
determining that said threshold number of sessions has been
reached.

3. The method of Claim 1, further comprising in response to said
15 classifying, determining whether or not said session
classification is of a class selected for bypassing said
acceleration, and wherein said accelerating is disabled for said
20 communications session in response to determining that said
class is selected for bypassing said acceleration.

4. The method of Claim 1, wherein said classifying determines that said communications session is a low priority type of session and further comprising determining whether or not resources are available for accelerating said communications session, wherein said accelerating is performed for said communications session in response to determining said resources are available, and wherein said accelerating may be ceased in response to a request to accelerate a higher-priority session.

5. The method of Claim 4, wherein said classifying classifies said communications session by type of transmission by examining a destination port number, and wherein said accelerating is selectively performed in conformity with said type of transmission.

6. The method of Claim 1, wherein said communication session is a transmission control protocol (TCP) session, and wherein said acceleration is performed by:

locally terminating said TCP session;

converting a TCP datum to a proprietary protocol datum for transmission over a satellite communications channel; and

reconstructing said TCP datum at a receiving end of said satellite communications channel.

7. The method of Claim 1, wherein said classifying further determines that said communications session is to be coupled through a satellite communications channel, and wherein said accelerating is selectively performed in conformity with said
5 determination.

8. The method of Claim 1, wherein said acceleration has a controllable data rate configured by adjusting a buffer size associated with said communications session.

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9. The method of Claim 1, wherein said acceleration is performed by using resources pre-allocated for said communication session.

10. The method of Claim 1, further comprising:

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pre-empting resources from an existing communications session of lower-priority than said communications session and using them for said accelerating; and

throttling said existing communications session by using a transmission control protocol (TCP) flow control mechanism.

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11. A system comprising:

a packet processor for processing communications packets;

and

a network coupled to said packet processor, wherein said

5 packet processor classifies said communications session to
produce a session classification and selectively accelerates
said session in conformity with said session classification.

12. The system of Claim 11, wherein said packet processor

10 further determines whether or not a threshold number of sessions
has been reached for said session classification, and wherein
said packet processor does not accelerate said communications
session if said threshold number of sessions has been reached.

13. The system of Claim 11, wherein said packet processor

15 further determines whether or not said session classification is
of a class selected for bypassing said acceleration, and wherein
said packet processor does not accelerate said communications
session if class is selected for bypassing said acceleration.

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14. The system of Claim 1, wherein said packet processor determines that said communications session is a low priority type of session and that resource availability is less than a threshold value, and wherein said packet processor does not
5 accelerate said communications session in response to determining that said communications session is a low priority type of session and that said resource availability is less than a threshold value.

10 15. The system of Claim 11, wherein said packet processor classifies said communications session by type of transmission by examining a destination port number, and wherein said packet processor does not accelerate said communications session in
15 response to determining that said communications session is a lower priority type of transmission.

16. The system of Claim 11, wherein said packet processor processes an transmission control protocol (TPC) session, and wherein said acceleration is performed by locally terminating
20 said TCP session, converting data to a proprietary for transmission over a satellite communications channel for subsequent reception and reconstruction of said TCP session by another packet processor at a receiving station.

17. The system of Claim 11, further comprising a satellite communication channel and wherein said packet processor determines that said communications session is to be coupled through said satellite communication channel, and wherein said packet processor accelerates said communications session in conformity with said determination.

18. The system of Claim 11, wherein said packet processor accelerates said communication session by removing resources used by an existing communication session and throttles said existing communications session by using a transmission control protocol (TCP) flow control mechanism.

19. A network device comprising:

a plurality of network ports for connecting network devices;

a packet processor coupled to said plurality of network ports for processing packets communicated from or to said ports;

a memory coupled to said packet processor for storing data and program instructions for execution by said packet processor;

a satellite communications interface for coupling said packet processor to a satellite communications channel; and

program means executed by said packet processor for selectively accelerating a communications session between at least one of said plurality of network ports and said satellite communications interface, wherein said selective acceleration is performed in response to a classification of said communications session.

20. A computer program product comprising program instructions
encoded in signal bearing media for execution by a packet
processor, wherein said program instructions selectively
accelerate a communications session for transmission over a
5 satellite communications channel, wherein said selective
acceleration is performed in response to a classification of
said communications session.

21. A configuration manager comprising program instructions encoded in signal bearing media for execution by a processor coupled to a configuration console, wherein said program instructions produce configuration data for directing a packet processor to selectively accelerate a communications session for transmission over a satellite communications channel, wherein said selective acceleration is performed in response to a classification of said communications session.

22. The configuration manager of Claim 21, wherein said configuration console is a web page displayed on a browser coupled to the Internet, and wherein said configuration data is produced by entering data within fields on said web page for transmission to said packet processor.